

PRESENTATION

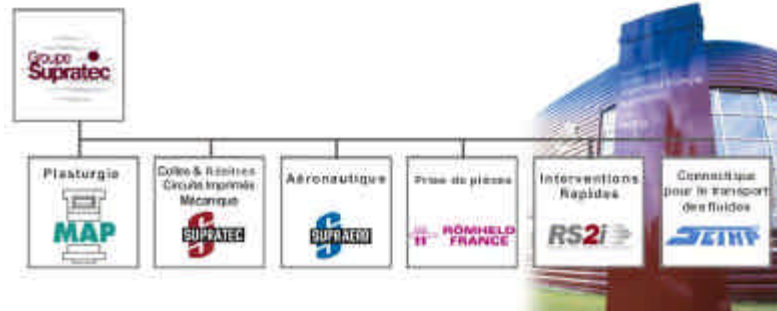
Groupe
Supratec

HISTORIQUE



- Spécialiste depuis plus de 40 ans, dans la négoce et les prestations industrielles
- Le groupe existe depuis 1962, Monsieur Jean-Marie JESTIN est le président du directoire
- Le groupe SUPRATEC est composé de plusieurs sociétés.
- 180 personnes
- Environ 33 Millions d'euros de CA

NOS DIFFERENTES SOCIETES



Nos cellules SUPRATEC

-  Usinage
-  Tôlerie Chaudronnerie
-  Circuits imprimés
-  Éléments normalisés
-  Découpage emboutissage
-  Colles & Résines

Cellule Colles & Résines

La force d'un groupe , la flexibilité d'une cellule

- 6 commerciaux sur le terrain
- 2 assistantes commerciales
- 1 responsable laboratoire et essais
- 1 responsable cellule
- 300 clients
- 3 millions de CA
- Partenaire N°1 mondial de DELO en CA

Cellule Colles & Résines

- Colles techniques DELO
- Colles thermofusibles SUPRABOND
- Lubrifiants hautes performances
- Matériels de dépose et d'insolation DELO et NETZSCH
- Support technique de A à Z (tests mécaniques , physiques , chimiques , vieillissements ...)

Nos marchés

- Carte à puce
- Electronique
- Automobile
- Industrie du Verre
- Industrie de l'injection plastique
- Mécanique

Gamme DELO

- Colles photosensibles acrylates et époxy
- Colles époxy mono et bicomposantes
- Colles anaérobies
- Colles cyanoacrylates
- Colles silicones
- Colles polyuréthanes
- Dégraissants avant collage

Gamme DELO

- Colles conductrices électriques
- Matériels de dépose de colles
- Lampes d'insolation UV
- Services :
- Tests et rapports laboratoire
- Séminaires collage
- Développement de produits sur mesure

Gamme SUPRABOND

- Colles thermofusibles EVA (carton)
- Colles Polyoléfine PF (plastiques)
- Colles pression sensible PSA
- Colles polyamide PA (hte température)
- Matériel de dépose (fondoir et buse)

DELO

DELO-DUALBOND DF740/DF795
Dipl.-Ing. (FH) Rainer Dörfler




Stand: 07/04

DELO

The Dam & Fill success story

- Fast inline-curing (5,000 – 8,000 modules per hours)
- Minimum cast height
- Flexible cast geometry
- Customized flexibility
- High reliability, proof are the several billion casted modules
- Casting systems can be bought off the peg



Black casting compounds for casting chip modules of Smart Cards with the Dam & Fill method

Stand: 07/04

Request „Opacity“

DELO

- Determination according to the FIPS standard
- High protection against manipulation
- Safety feature „light-sensitive chip“
- Setting of a psychological barrier

Black casting compounds for casting chip modules of Smart Cards with the Dam & Fill method

Stand: 02/04

Contradiction

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Opaque product



Light/UV curing

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Stand: 02/04

Solution

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- **DELO-DUALBOND DF740/DF795**

Combined heat and UV curing at standard casting systems

Non-transparent for UV, visible light and light in the immediate IR range

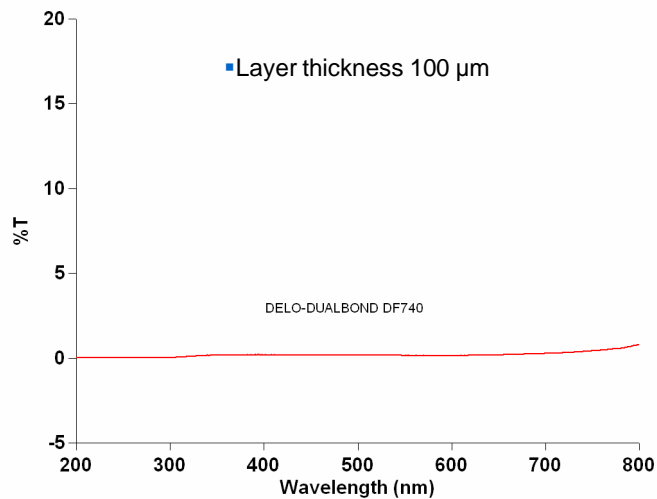
		DF740	DF795
Viscosity	mPas	1,500	120,000
Filler contents	%	43	43
D99.5	µm	24	24
Tensile strength	MPa	18	13
Elongation at tear	%	18	17
E-modulus	MPa	420	200
Water absorption	%	0.6	0.5
Tg	°C	45	55
CTE [30 - 150 °C]	ppm/K	145	150
Cl ⁻ - contents	ppm	= 10	= 10
F ⁻ - contents	ppm	= 250	= 250
Na ⁺ - contents	ppm	= 20	= 20
K ⁺ - contents	ppm	= 20	= 20
Br ⁻	ppm	= 20	= 20
Sb ⁺	ppm	= 10	= 10

Black casting compounds for casting chip modules of Smart Cards with the Dam & Fill method

Stand: 02/04

„Transmission measuring of black chip casting compound“

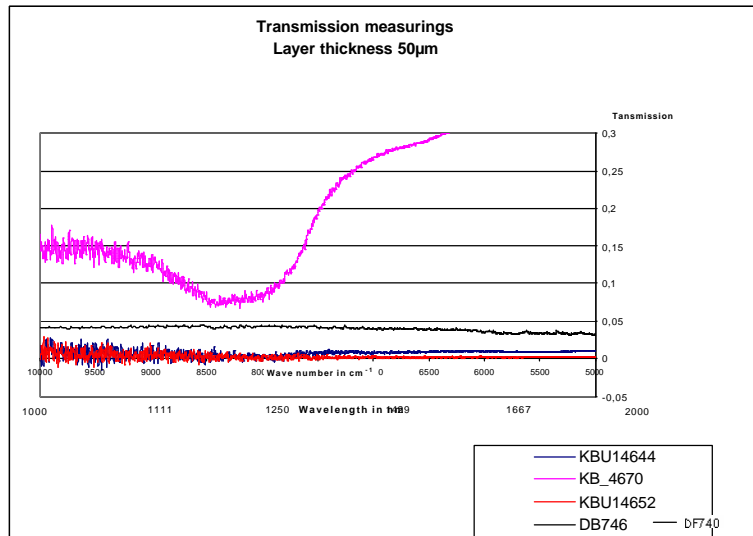
DELO



Black casting compounds for casting chip modules of Smart Cards with the Dam & Fill method

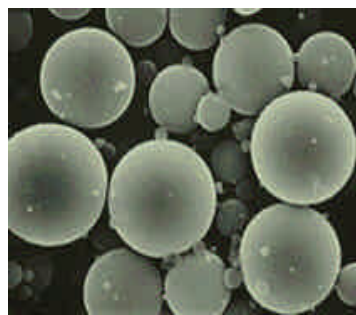
Stand: 02/04

„Transmission measuring of black chip casting compound“



Black casting compounds for casting chip modules of Smart Cards with the Dam & Fill method

Comparison of fillers



- Filler KATIOBOND 4670
- „new“ Filler DF740

Black casting compounds for casting chip modules of Smart Cards with the Dam & Fill method

Qualification tests

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- TMCL - 40 °C/100 °C 300 cycles
- THBS 85 °C/85 % rel. humidity 500 hours
- T & H 40 °C/93 % rel. humidity 48 hours

- Simulated installation 235 °C / 1.3 s / 60 N
- Bending test 1000 cycles
- Torsion test 1000 cycles
- Mailing test > 30 cycles
- Flash test

Black casting compound for casting chip modules of Smart Cards with the Dam & Fill method

Standard 02/04

Processing

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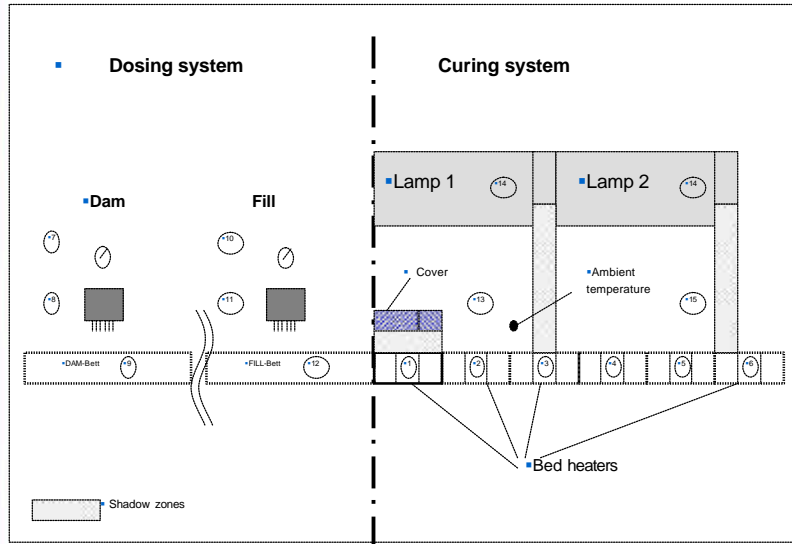


Black casting compounds for casting chip modules for Smart Cards with the Dam & Fill method

Standard 02/04

Processing

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Black casting compounds for casting chip modules of Smart Cards with the Dam & Fill method

Processing parameters

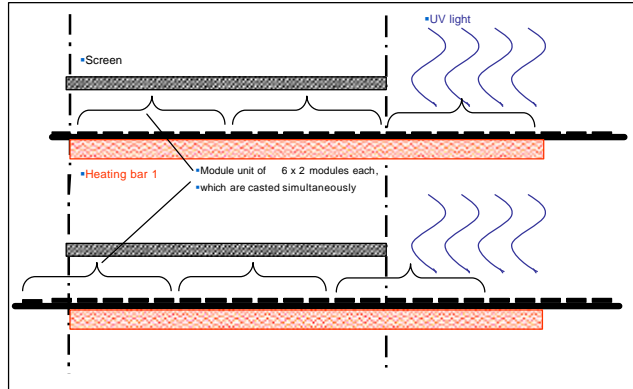
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No.	Position	Type of Setting	Range of setting from/to	Unit
1	Heating bar 1	Temperature of bed	110 - 120	°C
2	Heating bar 2	Temperature of bed	115 - 130	°C
3	Heating bar 3	Temperature of bed	125 - 135	°C
4 - 6	Heating bar 4 - 6	Temperature of bed	100 - 135	°C
7	Dosing of Dam	Dosing pressure	3.5 - 4.5	bar
8	Dosing element - Dam	Temperature of element	25 - 30	°C
9	Heating bed - Dam	Temperature of bed	25 - 30	°C
10	Dosing of Fill	Dosing pressure	3.5 - 4.5	bar
11	Dosing element - Fill	Temperature of element	25 - 30	°C
12	Heating bed - Fill	Temperature of bed	65 - 85	°C
13	Cover	Length of UV screen	12 - 18	Pitch lengths
14	Lamp 1 + 2	UVA intensity	30 - 100	mW/cm ²
15	Exposure room	Ambient temperature	40 - 80	°C

Black casting compounds for casting chip modules of Smart Cards with the Dam & Fill method

Coordination of heat/light curing

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- Installation of the forward feed units into the curing device of the casting system. The installation at the top is correct. The forward feed unit below, however, is out-of-line with the front end of heating bar 1 and the screen exit.

Black casting compounds for casting chip modules of Smart Cards with the Dam & Fill method

Stand: 02/04

Casting of chip modules

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- Excellent casted chip modules (in this illustration without the chip). The surface is even and has a satin finish.

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